

Abstract

SERIES HYBRID ELECTRIC VEHICLE

There is provided a technique for improving the efficiency of a generation system of a series hybrid electric vehicle. The series hybrid electric vehicle is composed of: an engine; an n-phase generator driven by the engine; a rectifier generating a DC voltage from an n-phase AC voltage received from the n-phase generator; a battery charged with the DC voltage generated; a motor driving drive wheels; an inverter driving the motor on the DC voltage received from the rectifier and/or a DC voltage supplied from the battery; and a switch. The n-phase generator has n armature windings each having one end connected to a common neutral point. The rectifier has a negative terminal, a positive terminal on which a higher potential is generated than on the negative terminal, and n rectifying arms. Each of the n rectifying arms includes: a first diode connected between an intermediated node connected to the other end of the corresponding armature windings and the negative terminal; and a second diode connected between the intermediate node and the positive terminal. The switch is connected between the neutral point and the negative terminal.